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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/598,447	09/20/2006	Jamie Oag	OPT-01	5335

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EXAMINER
JONAITIS, JUSTIN M

ART UNIT	PAPER NUMBER
3752	

NOTIFICATION DATE	DELIVERY MODE
05/10/2012	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	10/598,447	OAG, JAMIE	
	Examiner	Art Unit	
	JUSTIN JONAITIS	3752	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *17 April 2012*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on _____; the restriction requirement and election have been incorporated into this action.

4)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

5)☒ Claim(s) *1,5-7,9-11,13,14,22-24,26,30 and 36-46* is/are pending in the application.

5a) Of the above claim(s) _____ is/are withdrawn from consideration.

6)☐ Claim(s) _____ is/are allowed.

7)☒ Claim(s) *1,5-7,9-11,13,14,22-24,26,30 and 36-46* is/are rejected.

8)☒ Claim(s) *9, 10, 11, 13, 22, 23, 30, 45, 46,* is/are objected to.

9)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

10)☐ The specification is objected to by the Examiner.

11)☒ The drawing(s) filed on *17 April 2012* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

12)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

13)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 4/17/2012 has been entered.

Claim Objections

2. A series of singular dependent claims is permissible in which a dependent claim refers to a preceding claim which, in turn, refers to another preceding claim.

Therefore, claims 9-11, 13, 22, 23, 30, 45,and 45 are objected to because, a claim which depends from a dependent claim should not be separated by any claim which does not also depend from said dependent claim. It should be kept in mind that a dependent claim may refer to any preceding independent claim. In general, applicant's sequence will not be changed. See MPEP § 608.01(n).

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claim 6 recites the limitation "the body outlet surface" in the claim. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1, 5-7, 9-11, 14, 24, 26, 30, 36, 37, 45 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent #3,101,176 to Goss.

In re claim 1, Goss discloses a nozzle for a hose or fixed pipework, the nozzle adapted for forming a solid wall of fluid and comprising a body (device (14)) and including a channel (see figure 2) extending through the body. The apparatus including a fluid deflector (baffle (40)) having a deflecting surface (impingement surface (42) including part of the stem (38)) which extends beyond an outer width of the body (figures 1 and 2 show that the deflector extends laterally beyond the top most point of conical section (20) of the body). The fluid deflector being arranged at the downstream end of the channel such that the fluid deflector and the body together define a circumferentially continuous outlet (see Figure 2) to permit fluid to leave the nozzle as a solid wall of fluid.

Please note the nozzle being a hydro-carbon well-test flare operation is an intended use of the apparatus. The intended use of the apparatus does not provide structural limitations that distinguish the apparatus over a nozzle with all the claimed structural limitations. Therefore the nozzle disclosed by Goss would be capable of being used with a hydrocarbon well-test operation as the nozzle disclosed by Goss meets all the claimed limitations.

In re claim 5, Goss discloses the apparatus as described above including the outlet being defined between the deflecting surface and an outlet surface of the body.

In re claim 6, Goss discloses the apparatus as described above including the deflecting surface (the portion of the stem (38) that extends vertically and transitions into the curved portion of the deflecting surface (42)) and a body outlet surface (walls of discharge orifice (24)) are substantially parallel.

In re claim 7 and 30, Goss discloses the apparatus as described above including the deflecting surface being disposed at an obtuse angle relative to a longitudinal axis of the body (see Figure 2). The angle being approximately 105 degrees.

In re claim 14, Goss discloses the apparatus as described above including the fluid deflector comprising a central beam (stem (38)) that extends into the body.

In re claim 45, Goss discloses the apparatus as described above including the central beam being attachable to the body.

In re claim 24, Goss discloses the apparatus as described above including the fluid deflecting surface being frusto-conical and angled away from the direction of fluid flow.

In re claim 36, Goss discloses the apparatus as described above including the width of the outlet being variable by adjusting a position of the fluid deflector relative to the body. While Goss doesn't disclose any mechanism that allows adjustment of the deflector after the

apparatus is assembled, the position of the deflector within insert (34) is able to be adjusted and thus making the width of the outlet being variable.

In re claim 26, Goss discloses a kit of parts for a nozzle comprising a body (device (14)), a fluid deflector (baffle (40)) and a coupling (insert (34)) to connect the fluid deflector to the body. The kit when assembled forming a nozzle comprising a body (device (14)) with a channel extending through the body (see Figure 2), and a fluid deflector (baffle (40)) having a deflecting surface (impingement surface (42)) arranged at a downstream end of the channel such that the fluid deflector and the body together define a circumferentially continuous outlet to permit fluid to leave the nozzle as a solid wall of fluid.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

8. Claims 9-11, 22, 37, and 46 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent #3,101,176 to Goss as applied to claim 1 above, and further in view of 2,323,464 to Glessner.

In re claim 46, Goss discloses the apparatus as described above but fails to specifically disclose the channel comprising a central portion that extends through the central beam of the fluid deflector.

Glessner however teaches it's known to provide a central channel that extends through the central beam of the fluid deflector as such modification allows for a modified spray pattern as fluid can be ejected from the center of the deflector as well as the sides.

Therefore one having ordinary skill in the art at the time the invention was made would have found it obvious to modify the deflector disclosed by Goss to include the central channel within the deflector as taught by Glessner as such modification allows for a modified spray pattern allowing fluid to be sprayed not only around the periphery of the deflector but at the center of the deflector.

In re claim 22, Goss in view of Glessner discloses the apparatus as described above including the nozzle comprising a filter coupling (threads (18)) could be used to accommodate a filter by coupling it to an upstream end of the channel.

In re claims 9-11 and 37, Goss discloses the apparatus as described above including the deflector being connected to the body by way of a spacer (insert (34)) but fails to disclose an adjusting mechanism to adjust the width of the outlet specifically such that the fluid deflector is movable relative to the body by way of a spacer and threaded connection such that the deflector can be adjusted by advance or retracting as it is rotated.

Glessner however teaches it’s known to mount a deflection surface to a spacer (thimble (17) which connects the defector to the nozzle body) by way of a threaded connection such that rotation of the deflector would advance or retract the deflector which in combination with the body defines the width of the opening as such modification allows an easy interconnection of components that allow for easy replacement and installation.

Therefore it would have been obvious to modify the apparatus disclosed by Goss to include the threaded mounting of the deflector as taught by Glessner as such modification allows easy construction of components that allow for replacement if necessary.

9. Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent #3,101,176 to Goss and U.S. Patent #2,323,464 to Glessner as applied to claim 46 above, and further in view of U.S. Patent #163,101 to Orr.

Goss in view of Glessner discloses the apparatus as described above but fails to specifically disclose a secondary nozzle coupling to couple a secondary nozzle to a downstream end of the central channel.

Orr however teaches it's known to provide a central channel of a deflecting surface with a threaded connection such that a variety of fittings can be connected to the central channel such as a plug to stop flow from the central channel or a nozzle to alter the fluid flow characteristics as it exits the central channel.

Therefore one having ordinary skill in the art at the time the invention was made would have found it obvious to modify the central channel disclosed by Goss in view of Glessner to include a threaded connection as taught by Orr as such modification would allow for the attachment of various fittings to the end of the central channel in order to alter the way the fluid flow interacts with the central channel.

10. Claims 39-44 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent #3,101,176 to Goss as applied to claim 1 above, and further in view of U.S. PG-Pub 2004/0028476 to Payne.

Goss discloses the apparatus as described above but fails to disclose a sensor controlling characteristics of the flow.

Payne however teaches it's known to use a flow rate sensor (80) as part of a fluid control sensor group (55) such that the fluid control group allows the system to detect and respond to proper fluid flow or even no flow due to blockage.

Therefore It would have been obvious to one having ordinary skill in the art at the time the invention was made to include a flow rate sensor as taught by Payne in the deflector or body of the apparatus disclosed by Glessner, as such modification would allow the device to detect and respond to a change in fluid flow conditions of the device including problems with the source based on the fluid impinging on the deflector or within the body (depending on the sensor's location).

With respect to the sensor being temperature or gas sensors to sense gas composition of the composition. Official notice is taken that gas sensors detecting the composition of the fluid or a temperature sensor detecting the temperature of the fluid are conventional or well known means for detecting conditions of a fluid.

Therefore one of skill in the art at the time the invention as made would have found it obvious to modify the apparatus disclosed by Goss in view of Payne to incorporate any of various types of sensors in order to detect conditions of a fluid flowing through the device and sending the information to a control system to control the conditions of the fluid flowing through the device (as taught by the use of sensors disclosed by Payne).

11. Claims 13 and 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent #3,101,176 to Goss and U.S. Patent #2,323,464 to Glessner as applied to claim 37 above, and further in view of U.S. Patent #1,628,823 to Chester et al. and U.S. PG-Pub

2004/0028476 to Payne et al Glessner discloses the apparatus as described above but fails to disclose the self-cleaning mechanism comprising an actuator and a sensor such that the deflector can be moved in response to a detected reduction in fluid flow rate.

Payne however teaches it's known to use a flow rate sensor (80) as part of a fluid control sensor group (55) such that the fluid control group allows the system to detect and respond to proper fluid flow or even no flow due to blockage.

Chester teaches it's known to provide a self-cleaning mechanism that utilizes the fluid flowing through the system as an actuator to respond to fluid pressure changes in the system, to allow the deflector to be adjusted in response to a change in the fluid pressure.

Therefore It would have been obvious to one having ordinary skill in the art at the time the invention was made to include a flow rate sensor as taught by Payne and a hydraulically actuatable deflector as taught by Chester to the apparatus disclosed by Glessner, as such modification would allow the device to detect and respond to a change in fluid flow conditions of the device including problems with the source as well as blockages within the apparatus.

Response to Arguments

12. Applicant's arguments with respect to claims 1, 5-7, 9-11, 13-14, 22-24, 26, 30 have been considered but are moot because the arguments do not apply to the current rejection. Specifically the amendments to the claims have been addressed in the rejection above.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JUSTIN JONAITIS whose telephone number is (571)270-5150. The examiner can normally be reached on Monday - Thurs 6:30am - 5:00 pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Len Tran can be reached on (571)272-1184. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/JUSTIN JONAITIS/
Examiner, Art Unit 3752
4-26-2012
/Jason J Boeckmann/
Primary Examiner, Art Unit 3752